

ABSTRACT

A polypeptide self-antigen useful in a tumor-specific vaccine mimics one or more epitopes of an antigen uniquely expressed by cells of the tumor. The polypeptide is preferably produced in a plant that has been transformed or transfected with nucleic acid encoding the polypeptide and is obtainable from the plant in correctly folded, preferably soluble form without a need for denaturation and renaturation. This plant-produced polypeptide is immunogenic without a need for exogenous adjuvants or other immunostimulatory materials. The polypeptide is preferably an scFv molecule that bears the idiotype of the surface immunoglobulin of a non-Hodgkin's (or B cell) lymphoma. Upon administration to a subject with lymphoma, the plant-produced, tumor-unique scFv polypeptide induces an idiotype-specific antibody or cell-mediated immune response against the lymphoma.